

Appl. No. 09/988,821
Reply to Office action of July 30, 2003

REMARKS/ARGUMENTS

Claims 1-21 were originally included with the application. No claims have been canceled, and claims 22-26 have been added. Hence, claims 1-26 are now pending.

Rejections Under 35 U.S.C. § 112

Claims 5, 6, and 20 have been rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The aforementioned claims have been amended to include "a Continental Shelf" in place of "the Continental Shelf" as suggested by the examiner. Accordingly, the rejections under 35 USC § 112 have been overcome, and applicants respectfully request withdrawal of the rejections and allowance of the claims.

Rejections Under 35 U.S.C. § 103

Previously pending claims 1-21 have been rejected under 35 U.S.C. § 103 as being unpatentable over a combination of Morishige and Peterson. Applicants respectfully traverse the rejections in relation to independent claims 1 and 16.

As the examiner is aware, at least two criteria must be met for a prima facie case of obviousness to be made: (1) there must be some suggestion or motivation to modify the cited references to include disclosure provided by another reference, and (2) the combination of references must teach or suggest all claim limitations. MPEP § 2142. In this case, neither criteria are met.

THERE IS INSUFFICIENT MOTIVATION TO COMBINE THE CITED REFERENCES

First, to properly combine the teachings of Morishige and Peterson, the examiner must identify something either implicitly or explicitly provided in the cited references, or knowledge generally available to one of ordinary skill in the art that would motivate that person to combine the disclosure of an automobile tunnel disposed above the surface of the

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seabed (Morishige) with the disclosure of a device for burying communication cable under the seabed (Peterson). MPEP § 2143. Simply stated, there is no such motivation, teaching or suggestion to combine the references, and perhaps for this reason the rejection neglects to identify such. Accordingly, the combination of Morishige and Peterson is improper, and applicants respectfully request withdrawal of the rejections and allowance of the claims.

The lack of motivation to combine the references is accentuated by the fact that the principle of operation of either of the cited references is wholly changed where the references are combined. Of course, where the proposed modification or combination changes the principle of operation of the prior art, then the teachings of the references are not sufficient to render the claims prima facie obvious. MPEP §2143.01. Here the rejection proposes combining an underwater automobile tunnel of Morishige with a method for burying communication cable of Peterson. The combination would require mounting massive cylinders, in some inconceivable manner, on a remote controlled and self-propelled sea plough for burying in the sea bed. This flies in the face of both references, as well as reason. First, the purpose of Morishige is to provide a method of manufacturing cylindrical sections at sea because they are too large to build on land (twenty meters in diameter by three hundred meters in length). See e.g., Morishige at abstract; col. 27, l. 60 – col. 28, l. 13. Thus, the combination requiring that the sections be mounted on an initially land based sea plough as taught by Peterson completely changes the principle of Morishige. Second, Peterson provides a method for burying flexible conduit in the seabed using a self propelled remote controlled sea plough. See e.g., Peterson at abstract. The conduit must be flexible to facilitate being carried by the sea plough and unrolled onto the sea bed. Replacing the

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flexible conduit with the massive inflexible cylinders of Morishige not only changes the principle of Peterson, but actually renders Peterson completely inoperable. Thus, for at least the aforementioned reasons, the combination of Peterson and Morishige is improper, and applicants respectfully request withdrawal of the rejections for at least this additional reason.

Yet further, one of ordinary skill in the art would not look to a method for constructing an underwater automobile tunnel (i.e., Morishige) for insight in how to provision a point-to-point cable connection. Said another way, the construction of automobile tunnels is neither in the field of endeavor as set forth in applicants' claims 1-21, nor disclosure teaching installation of massive cylinders on the seabed pertinent to the particular problem with which applicants are concerned. MPEP § 2141.01(a). Thus, a rejection relying on Morishige is improper, and applicants respectfully request withdrawal of the rejections for at least this additional reason.

Based on the forgoing discussion, claims 1-21 are allowable over the combination of Morishige and Peterson, such being respectfully requested herein by applicants.

FAILURE TO DISCLOSE TEACH OR SUGGEST EACH ELEMENT OF THE CLAIMS

Second, for the rejection to be proper, the cited references must teach each limitation as set forth in the claims. MPEP § 2143. As more fully discussed below in relation to independent claims 1 and 16, neither Morishige nor Peterson discloses, teaches, or suggests an offshore termination point fed by a plurality of ducts extending from a first point to the offshore termination point. Accordingly, for at least this additional reason, the rejection is improper and applicant respectfully requests withdrawal thereof.

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Claim 1 provides a method of facilitating provision of a point-to-point cable connection between first and second points separated by a span of water. The method includes, *inter alia*, providing a plurality of ducts from the first point through a first relatively shallow region to an offshore termination point. A cable is placed in one of the plurality of ducts coupling the first point to the offshore termination point. One or more cables coupling the offshore termination point to one or more locations remote from the first point are available at the offshore termination point. One of the remote locations is the second point, and the cable stretching from the first point to the offshore termination point is connected to the cable stretching from the offshore termination point to the second point.

Thus, as set forth in claim 1, a plurality of ducts are provided from a first location to an offshore termination point where a cable from the first point can be connected to one of a number of cables extending from the offshore termination point to various end points. Such a configuration provides for one or more advantages including, for example, allowing for the addition of new point-to-point cable connections "without the need to repeat the underwater laying process in the vicinity of the shore" where significant disruption of cable occurs from fishing, dredging and other shipping activities, and where laying cable is often highly regulated. Application at ¶ 9 (emphasis added); see also, Id. at ¶ 11.

Such an offshore termination point fed by a plurality of ducts extending to the first point can, for example, "significantly reduce the overall technical effort required to provide a subsequent long distance cable link". Id. at ¶ 11. This is at least in part because "[a] large amount of construction work is required in landing a cable, and, in the case of coastal installations, permits are required to land a cable and new cables must often be laid in place

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of old in the same route.” *Id.* Thus, “for example in a case of a cable crossing of many hundreds or even thousands of kilometers, provision of multiple ducting over a relatively small proportion of the distance can potentially significantly reduce expense and complication of subsequent cable installation operations.” *Id.* at ¶12. Use of an offshore termination point further allows for installing subsequent cables without necessarily requiring multiple ducts across the entire span of the connection. *Id.* at ¶7.

In stark contrast to claim 1, Morishige discloses a method for manufacturing large cylindrical sections that can be used in relation to constructing an underwater automobile tunnel. The method comprises constructing a number of cylindrical tubes of sufficient diameter (i.e. twenty meters) to allow the passage of multiple automobiles and trains there through. *See e.g., Morishige* at Figs. 40-44; *see also, col.* 27, l. 60 – col. 31, l. 9. In turn, each of these cylindrical tubes is lowered to the seabed where they rest on “seabed foundations”, and are attached one to another to create a continuous tunnel passing from one land mass to another. *See e.g., Morishige* at Fig. 38.

Morishige fails to disclose, teach or suggest an *offshore termination point* as provided in claim 1. Rather, Morishige teaches a tunnel stretching from a single entrance point (the left of Fig. 38) to a single destination point (the right of Fig. 38). There is simply no discussion of a point within the tunnel where two or more cables would be connected. Further, there is no discussion why such a point would be desirable. The rejection simply asserts that such a point can be anywhere “at or along 6013 or any point of 6002 extending along the seabed, as well as from another onshore second point to an or the same offshore point.” *Office Action of 7/30/03* at p. 4. However, the rejection fails to discuss or even

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suggest that one or more cables *terminate* at these amorphous points. Without such a suggestion of cable termination at these points, the points cannot be reasonably construed to be the "offshore termination points" set forth in claim 1.

Peterson discloses "a method and device for continuously laying and burying flexible submarine conduit". Peterson at col. 1, ll. 5-7. The method disclosed in Peterson includes stretching a cable "between two sites on land separated by a stretch of water", or between on offshore site and a site on land. Id. at col. 2, ll. 16-18; col. 6, l. 66 – col. 7, l. 7. Both approaches include repeating the underwater laying process in the vicinity of the shore, which is one of the problems avoided by using the method of claim 1. In particular, Peterson expressly teaches using a single duct conduit being laid by a remote controlled and self-propelled sea plough beginning "with a first step of laying and burying the cable on land." Id. at col. 3, l. 67 – col. 4, l. 1. The sea plough continues into the water until it reaches a predetermined point where it is retrieved by a vessel. Peterson at Figs. 4 and 6. Once retrieved, the cable is laid by a cable laying ship as usual.

Similar to Morishige, Peterson fails to disclose, teach or suggest the use of an offshore termination point fed by a plurality of ducts. Hence, Peterson and Morishige either separate or in combination fails to disclose teach or suggest each element of claim 1. Accordingly, applicants respectfully request withdrawal of the rejection, and allowance of claim 1 for at least the aforementioned reason. Further, claims 2-15 properly depend from allowable independent claim 1, and are thus also allowable for at least this reason.

Also, independent claim 16 includes an offshore termination point similar to that discussed in relation to claim 1 above. Accordingly, independent claim 16 is allowable for at

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least the aforementioned reasons. Claims 17-21 properly depend from allowable claim 16, and are thus also allowable for at least this reason.

ADDED CLAIMS 22 THROUGH 26

Claims 22 through 26 either depend from allowable independent claims, or include an offshore termination point, and are thus also in condition for allowance for at least the aforementioned reasons.

CONCLUSION

In view of the foregoing, Applicants submit that all claims now pending in this Application are in condition for allowance. Therefore, an early Office Action to that effect is earnestly solicited. If the Examiner believes a telephone conference would aid in the prosecution of this case in any way, please call the undersigned at 303-607-3500.

The \$90.00 fee for additional claims and the \$110.00 fee for the petition for a one month extension are included in the credit card form PTO-2038. Please charge any additional fees required or credit any overpayments for this Amendment to Deposit Account 06-0029.

Dated: 12/30/2003

Respectfully Submitted,



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